

***DICHAETOCORIS CALO CEDRUS*, A NEW SPECIES OF
PLANT BUG ASSOCIATED WITH INCENSE CEDAR
(CUPRESSACEAE), FROM WESTERN NORTH AMERICA
(HETEROPTERA: MIRIDAE: ORTHOTYLINI)**

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Abstract.—*Dichaetocoris calocedrus* NEW SPECIES, is described. This species is associated with *Calocedrus decurrens* (Torrey) Florin (Cupressaceae) in west-central Oregon. Characters defining the genus *Dichaetocoris* Knight are discussed and two new combinations are proposed: *Orthotylus ovatus* Van Duzee = *Dichaetocoris ovatus* (Van Duzee) NEW COMBINATION; *Orthotylus vanduzeei* Carvalho = *Dichaetocoris vanduzeei* (Carvalho) NEW COMBINATION.

Key Words.—Insecta, Miridae, *Dichaetocoris*, *Calocedrus*

The genus *Dichaetocoris* was erected by Knight (1968) for species of western North American orthotylinines that differed from *Orthotylus* by the presence of both simple and sericeous, decumbent setae on the dorsum. Polhemus (1985) suggested that *Dichaetocoris* has two types of simple, unmodified setae. He further diagnosed *Dichaetocoris* as lacking sexual dimorphism in hemelytral length, and being restricted to coniferous host plants. Stonedahl & Schwartz (1986) showed that *Dichaetocoris* has, in addition to simple setae, modified, narrowly lanceolate, sericeous setae, with converging ridges. They also noted that this setal type was also found in *Oaxacacoris* Schwartz & Stonedahl and *Presidiomiris* Stonedahl & Schwartz, but that these genera are also sister groups to *Pseudopsallus* Van Duzee, and not closely related to *Dichaetocoris*.

Clearly, an extensive analysis of character distributions among western North American orthotylinines is required to better delimit genera and determine generic relations. Nevertheless, we suggest that the following characters presently define the genus *Dichaetocoris*, although all characters may not be unique synapomorphies: (1) dorsal vestiture with erect to inclined simple setae, and recumbent, lanceolate, apically acuminate sericeous setae, with short, converging ridges; (2) lack of alar sexual dimorphism; (3) weakly convex pronotum, with rounded, lateral pronotal margins; (4) weakly sclerotized, flattened, or at least basally splayed out vesical spiculae; and (5) coniferous host plants. Using these criteria, we here describe a newly discovered species of *Dichaetocoris*, and transfer to *Dichaetocoris*, two other species currently placed in different genera.

The 15 species presently assigned to the genus *Dichaetocoris* are now known to occur on at least five genera of conifers: *Sequoia* Endlicher (Taxodiaceae); *Calocedrus* Kurz, *Cupressus* L., and *Juniperus* L. (Cupressaceae); and *Pinus* L. (Pinaceae). The pines from which *Dichaetocoris* is known are both pinyon pines, *Pinus edulis* Engelman and *P. monophylla* Torrey & Fremont.

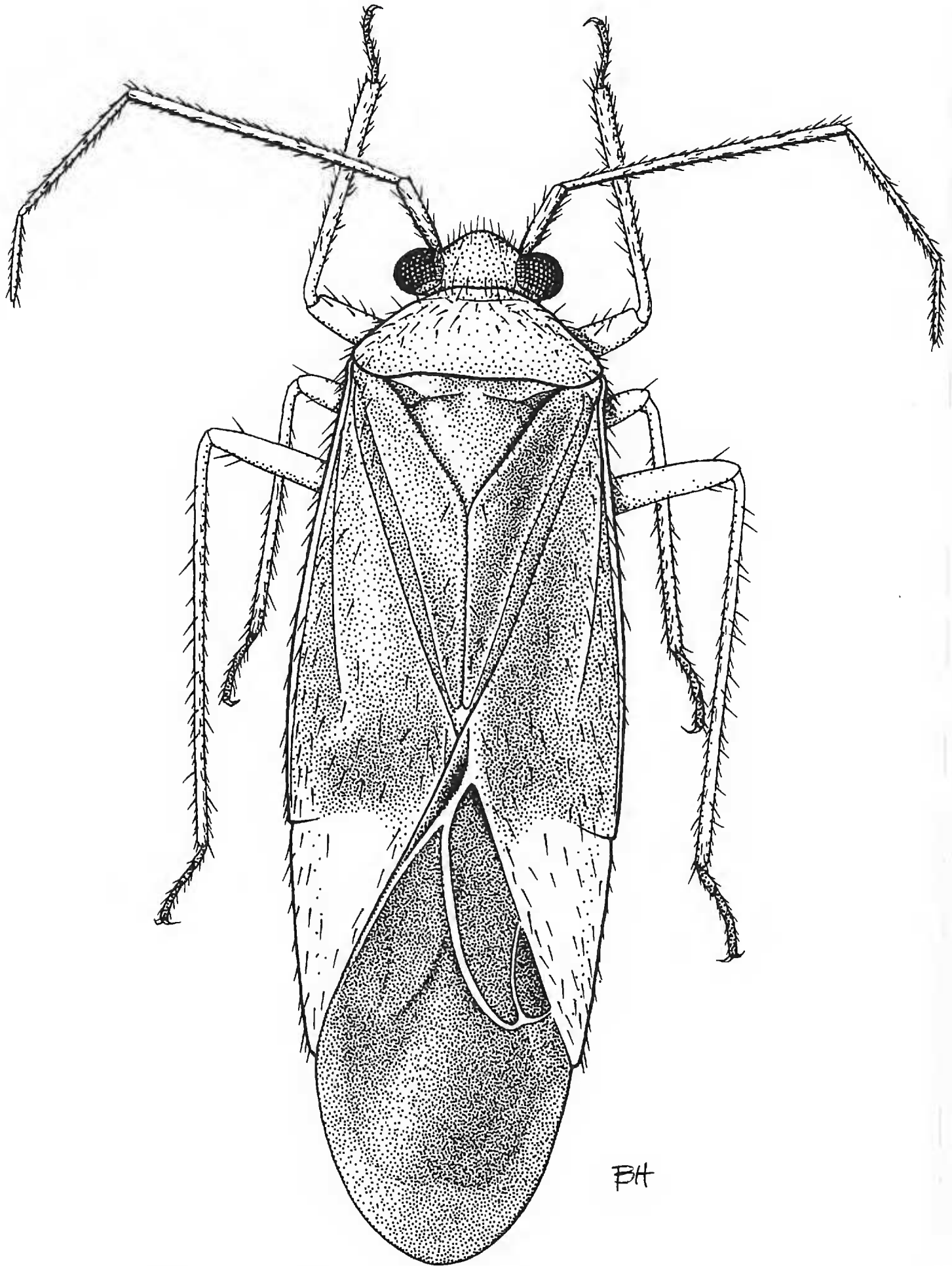


Figure 1. *Dichaeetocoris calocedrus*, dorsal habitus male.

DICHAETOCORIS CALO CEDRUS ASQUITH & LATTIN, NEW SPECIES

Types. — Holotype male. Data: OREGON. *DESCHUTES Co.*: SE base of Black Butte, 14 Jun 1990, A. Asquith & J.D. Lattin, ex. *Calocedrus decurrens* (Torrey) Florin. Holotype deposited in the collection of the California Academy of Sciences (CAS), San Francisco. Paratypes. Data: OREGON. *DESCHUTES Co.*: 9 males,

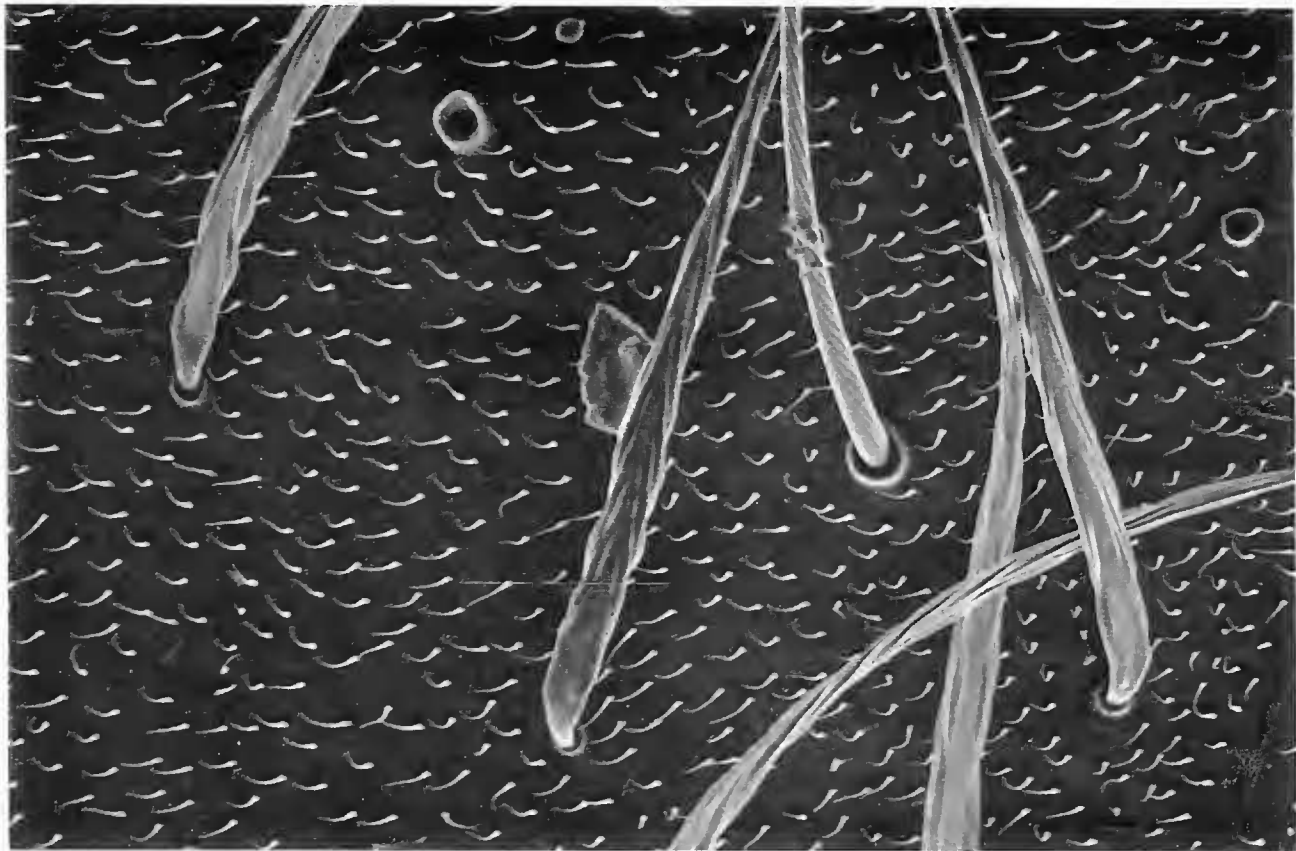


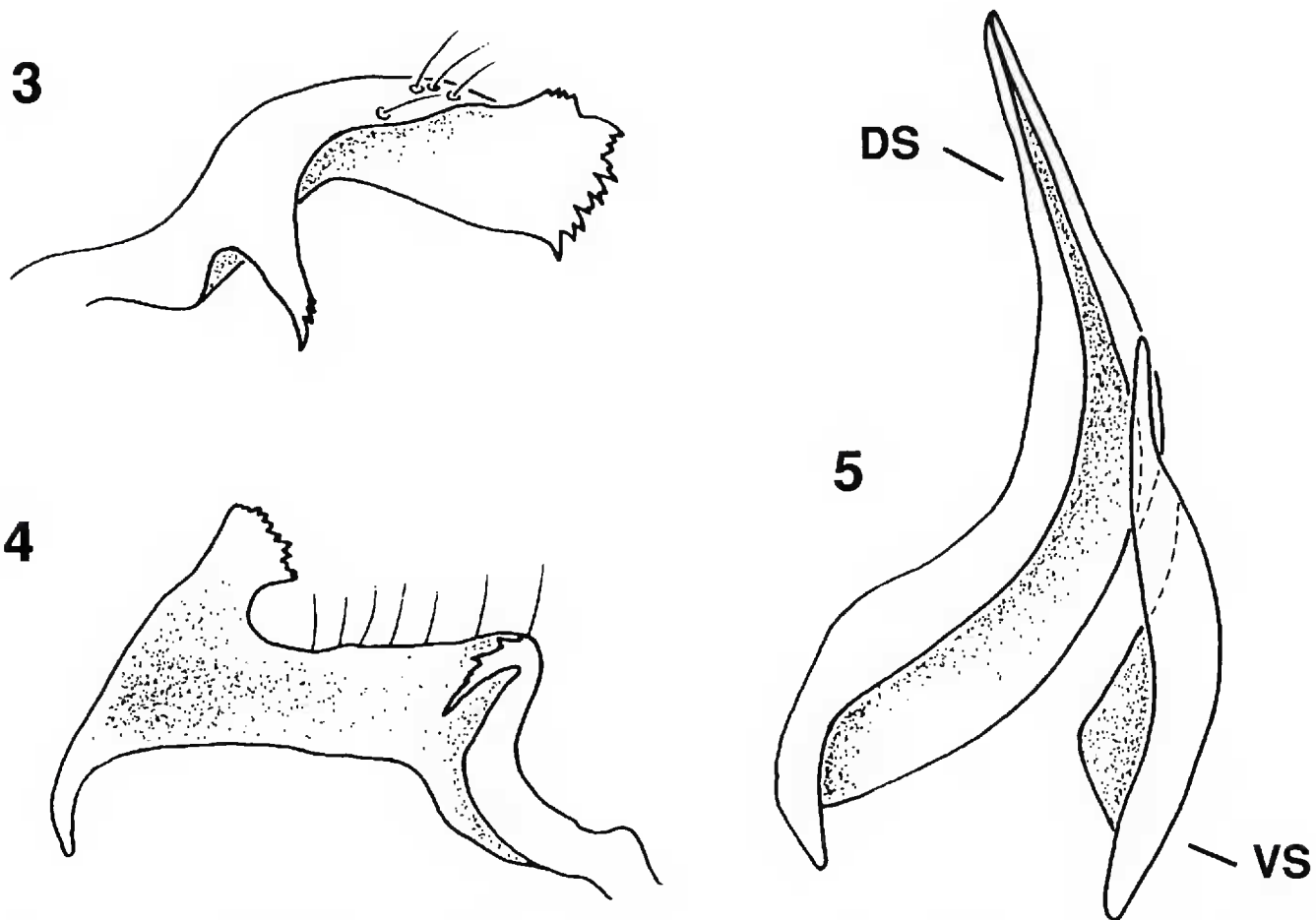
Figure 2. *Dichaetocoris calocedrus*, sericeous setae on hemelytra.

10 females, same data as holotype; deposited in Systematic Entomology Laboratory, Oregon State University (OSU-SEL) and the California Academy of Sciences (CAS), San Francisco.

Description. — *Male* (Fig. 1). Length 5.16–5.59 mm; general coloration green fuscous, with hemelytral margins and cuneus pale; dorsal vestiture with erect or inclined, short setae, dark on fuscous areas and pale on light colored areas, and recumbent, narrowly lanceolate, sericeous setae, with short, converging ridges, giving fluted appearance (Fig. 2). *Head*: Width across eyes 0.82–0.83 mm; width of vertex 0.39–0.41 mm; yellow-brown; antennae yellow, tinged with brown, segment I 0.41–0.43 mm; segment II 1.52–1.59 mm; segment III 0.93–0.96 mm; segment IV 0.43–0.48 mm; labium reaching to or beyond apices of metacoxae. *Pronotum*: Posterior width 1.30–1.35 mm; yellow anterior of calli; calli and disk yellow green; mesoscutum yellow-green to fuscous medially, yellow laterally; scutellum yellow fuscous, apex usually pale. *Hemelytra*: Green fuscous; embolium, corium bordering embolium, and cuneus pale; membrane grey fuscous, veins dark. *Legs*: Yellow; tibiae weakly tinged with green; tarsi, particularly distal segments, variably fuscous. *Genitalia*: Posteroventral surface of genital capsule with short, peg-like setae; apex of right paramere squared and strongly serrate (Fig. 3), basal arm with apex dentate. Left paramere hammer-shaped (Fig. 4); apicodorsal process broad and serrate; apicoventral process narrowly elongate, curved mesally; narrow basal arm present, with two or three small teeth. Apex of theca acuminate, heavily sclerotized, but entire and slightly convoluted; vesica with 2 large, weakly sclerotized, apically acuminate, trough-shaped spiculae (Fig. 5); ventral spicula one-half the length of dorsal spicula.

Female. — Length 4.73–5.12 mm; width across eyes 0.81–0.83 mm; width of vertex 0.43–0.44 mm; antennal segment I 0.41–0.43 mm; segment II 1.46–1.59 mm; segment III 0.83–0.87 mm; segment IV 0.43–0.44 mm; posterior width of pronotum 1.29–1.36 mm.

Diagnosis. — *Dichaetocoris calocedrus* NEW SPECIES is most similar to *D. vanduzeei* (Carvalho) (see below) in its large size, dark colored scutellum and infuscated hemelytral membrane. *Dichaetocoris calocedrus* is differentiated by its larger size (total length > 4.5 mm), elongate hemelytra, the narrowly hammer-shaped structure of the left paramere (Fig. 4), and by its fuscous dorsal coloration with contrasting pale lateral margins and cuneus (Fig. 1).



Figures 3–5. *Dichaetocoris calocedrus*, male genitalia. Figure 3. Right paramere, medial view. Figure 4. Left paramere, medial view. Figure 5. Vesical spiculae. DS = Dorsal spicula, VS = Ventral spicula.

Etymology.—Named for the plant genus from which this species was collected. The genus *Calocedrus* Kurz is sometimes included as a segregate of the genus *Libocedrus* Endlicher; however, most recent references consider *Calocedrus* to be a distinct genus, containing only those species in the Northern Hemisphere.

Distribution.—Known only from the eastern slopes of the Cascade Mountains in west-central Oregon.

Discussion.—*Dichaetocoris calocedrus* is unusual in its broad, trough-shaped spiculae. Other genera of western Orthotylini with modified setae have a variable number of narrowed, sclerotized, usually serrate spiculae (Asquith 1991, Stone-dahl & Schwartz 1986). Some species of *Pseudopsallus* approach the condition in *D. calocedrus* in having broadly trough-shaped spiculae, particularly near their bases. We examined the spiculae of two other species of *Dichaetocoris*, both undescribed, associated with *Juniperus* L. in western Oregon. Both of these species have moderately broad spiculae, with weakly recurved lateral margins, but unlike that of *D. calocedrus*. In addition, the spiculae of both *Juniperus* species are serrate distally.

Material Examined.—Type series.

DICHAETOCORIS VANDUZEEI (CARVALHO), NEW COMBINATION

Orthotylus cupressi Van Duzee 1925:399.

Orthotylus vanduzeei: Carvalho 1955:225. Replacement name.

Originally described as *Orthotylus cupressi* by Van Duzee (1925), this name was preoccupied and the species was given its replacement name by Carvalho (1955). We examined paratypes of this species in the California Academy of

Sciences and consider it to be a *Dichaetocoris*, based on the characters described above. Of all species that we have examined, *D. vanduzeei* most closely resembles the new species, *D. calocedrus*, in its large size, color pattern and general shape of the left paramere. This species is known only from *Cupressus sargentii* Jepson in Marin Co., California.

DICHAETOCORIS OVATUS (VAN DUZEE), NEW COMBINATION

Orthotylus ovatus Van Duzee 1916:105.

Orthotylus (Melanotrichus) ovatus: Carvalho 1958:117.

Melanotrichus ovatus: Henry & Wheeler 1988:429.

When first described, Van Duzee (1916) allied *ovatus* with an eastern North American species, *Orthotylus catulus* Van Duzee, which is now recognized as a species of *Melanotrichus*. Based on our examination of paratypes in the California Academy of Sciences, we found that *ovatus* clearly belongs to the genus *Dichaetocoris*. This species is associated with *Juniperus*, and is thus far known only from the original collection near Lake Tahoe, in El Dorado Co., California.

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